

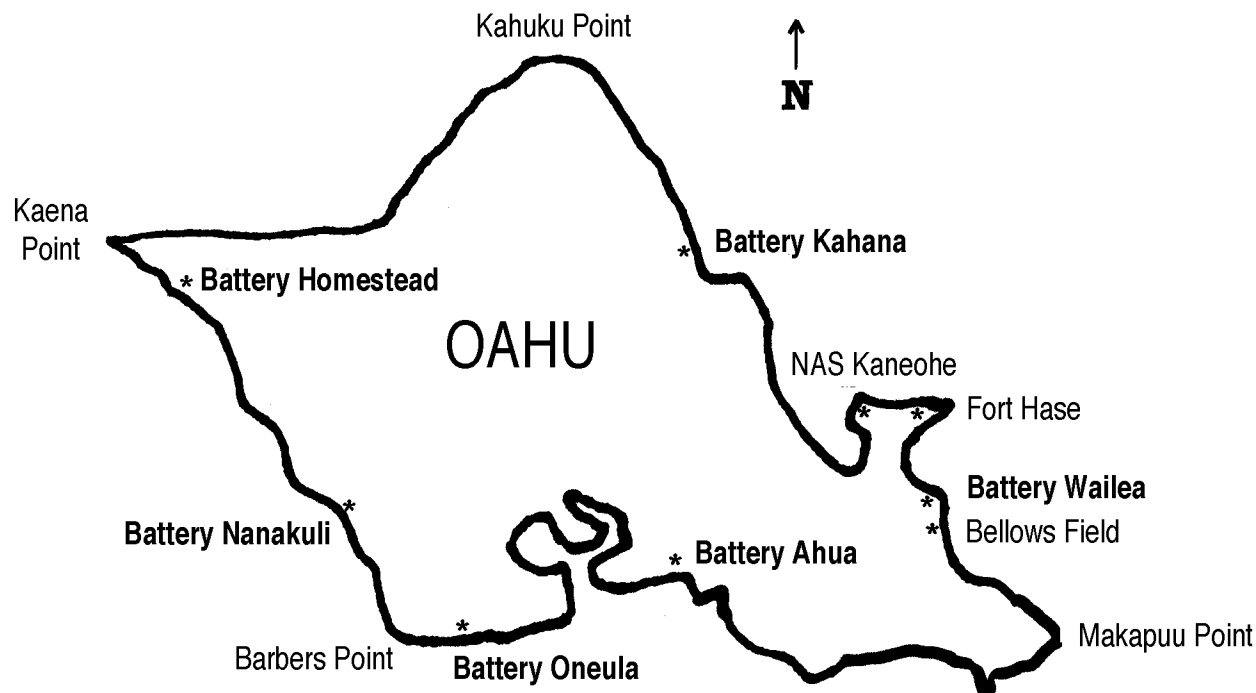
The 5-Inch Emergency Naval-Gun Batteries on Oahu, T.H. 1942-1943

John D. Bennett

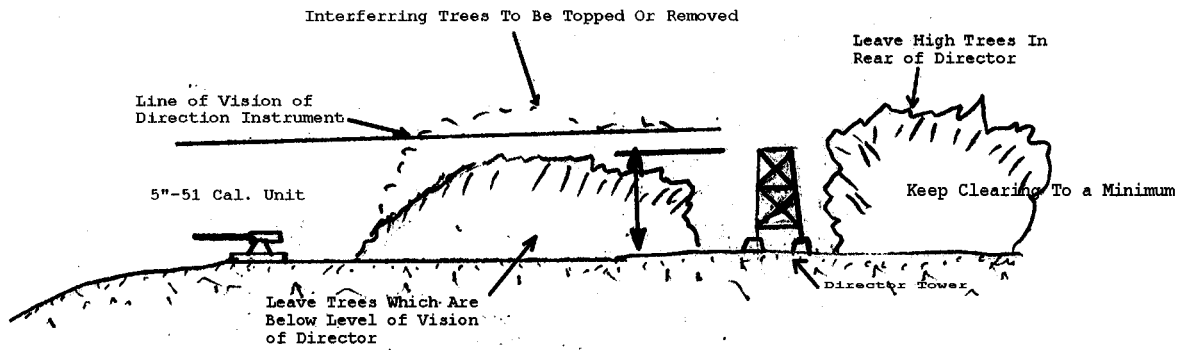
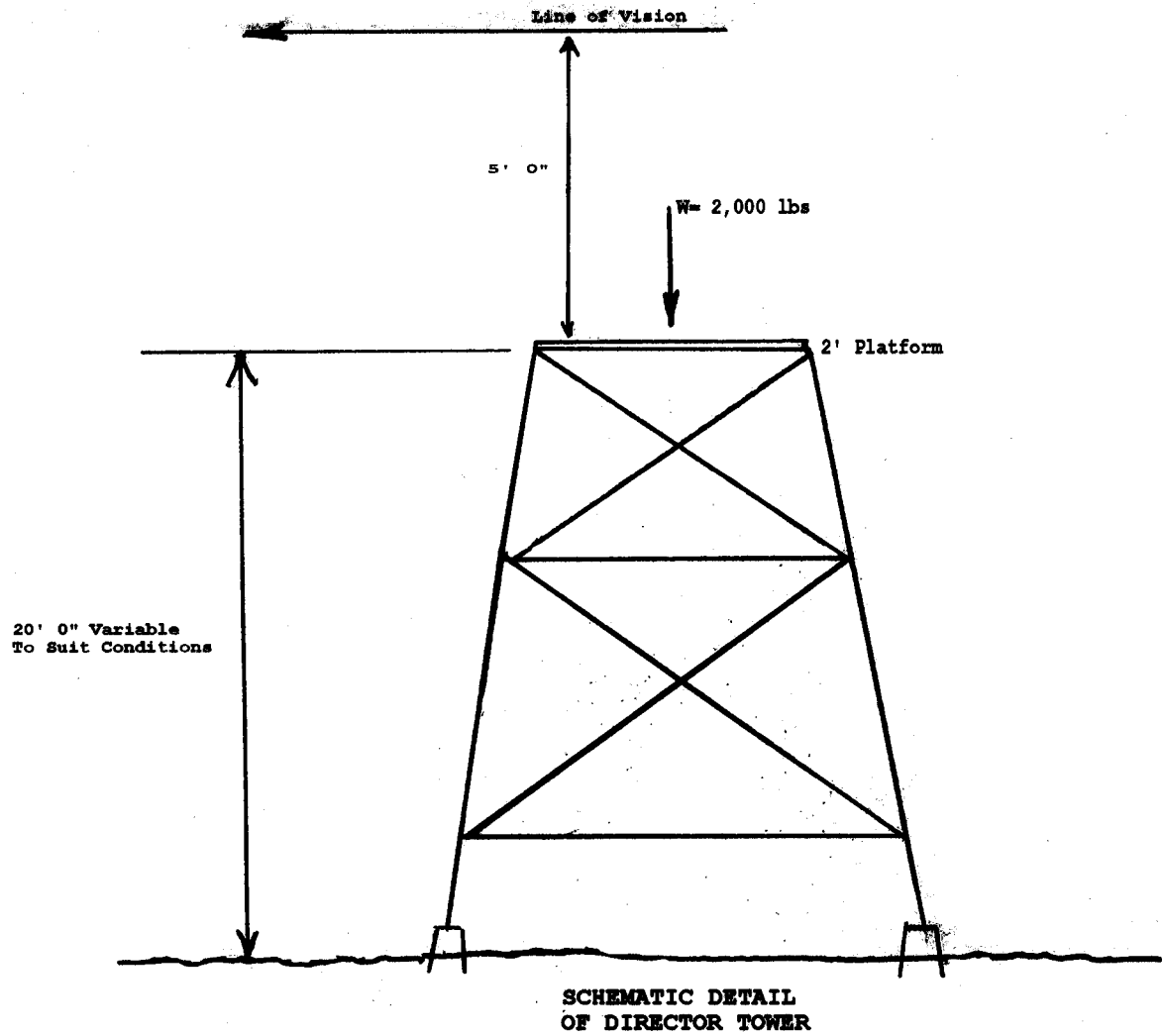
Photos by author unless otherwise noted.

Shortly after the December 7, 1941, attack on Oahu, the Hawaiian Department commander, Lt. Gen. Delos C. Emmons, met with the navy to discuss the urgent need to augment the coastal defenses of the Hawaiian Islands with additional batteries. As a result, the navy offered several models of obsolescent guns, with ammunition, from their stocks, to be used temporarily by the army as emergency coastal batteries. Before January 7, 1942, a conference was held with Brig. Gen. Robert C. Garrett, commanding the Hawaiian Seacoast Artillery Command (HSCAC), who represented the Hawaiian Coast Artillery Command (HCAC); Lt. Col. William S. Lawton, representing the Hawaiian Department commander; and various naval officers. These officers agreed to use eleven 5-inch 51-caliber navy broadside guns as emergency seacoast batteries. Subsequent to the conference, Maj. Gen. H.T. Burgin, commanding HCAC, initially recommended three unnamed sites for the eleven guns.(1)

General Emmons ordered the department engineer to design and construct emplacements and fire control structures for the 5-inch naval guns, the first seven of which were to be transferred on or about February 15, 1942. General Emmons further ordered the district engineer to survey the terrain and to build the gun emplacements of concrete and wood, using the design data previously furnished his office.(2) The gun mounts were to be attached to 2-inch steel plate, cushioned by 2 inches of white-oak planking, then bolted to reinforced-concrete gun blocks. The $\frac{3}{4}$ -inch outer-row hold-down bolts on



Location of emergency 5 in gun batteries



Drawing Not To Scale
J.D. Bennett, 2002

Drawing of proposed battery command post tower. Adapted from Archives II, NARA

the steel plate and planking were to be drilled by the department engineer. The naval ordnance shop at the Pearl Harbor Shipyard was responsible for drilling the holes for the pedestal mounts, as they were not uniform in size. The steel plates and oak planking were to be marked for identification and matched to specific gun mounts.

Each battery was initially to be provided with two 15 x 9 x 6-foot splinterproof ammunition shelters per gun and a personnel shelter of the same dimensions; the ammunition shelters were eventually lengthened 7 feet in the final form. Batteries Oneula and Ahua were to be equipped with battery commanders' observation posts on four-foot-square platforms atop wooden towers tall enough to see over the surrounding treetops.(3)

Four permanent sites - Keaau Homesteads (3 guns), Oneula Beach (3 guns), Ahua Point (3 guns), Kahana Bay (3 guns - 2 from the temporary battery at Wailea Pt. and 1 from Oneula Beach) - were selected after surveys by the (Hawaiian) Coast Artillery Command prior to January 22, 1942, although the locations were not specifically mentioned in an inter-department memorandum. The batteries were sited to repel small naval vessels as well as amphibious landings. Battery Wailea was an interim site on the East Coast. When Battery Kahana was completed, both of Wailea's guns were transferred to Kahana. A detail of the 3rd Marine Defense Bn initially manned both 5-inch guns emplaced at Battery Nanakuli until the battery was turned over to the army. Proper camouflage discipline was to be maintained, with every effort made not to disturb the existing shrubbery; construction traffic was to be kept on existing roads as far as possible to avoid damaging the existing natural camouflage.(4)

Distribution of 5-inch naval guns

<u>Battery</u>	<u>No. of Guns</u>	<u>Status</u>
Homestead	3	Permanent
Oneula*	3	Permanent
Ahua**	3	Permanent
Wailea***	2	Temporary
Kahana	3	Permanent
Nanakuli****	2	Permanent

* 1 gun transferred to Battery Kahana

** 1 gun transferred to Battery Oneula

*** 2 guns transferred to Battery Kahana

**** Originally a USMC battery – transferred to the army

The total number of guns is greater than the actual number, because several guns were emplaced at more than one location.

Recommendations were made to equip the 5-inch batteries with Diesel-driven 25 KVA, 220 V, 3-phase generators in case commercial power was cut-off in an enemy attack. The generators were in stock and were to be installed. The district engineer was instructed to obtain a 100 KVA generator to power one additional, unnamed, 5-inch battery. General Emmons ordered the department engineer to begin construction of the 5-inch batteries on March 28, 1942.(5)

The permanent 5-inch 51 cal batteries were to be equipped with the following splinterproof structures:

1. Projectile magazines (8 x 22 feet)
2. Powder magazines (9 x 22 feet)
3. Gas-proof plotting room (16 x 19 feet)
4. Battery command post
5. Small standby generator building

The three batteries located near the shoreline were equipped with battery commanders' and fire control stations atop 15-foot wooden towers, in place of splinterproof concrete structures. All other structures were to be below ground with protective entrances, or cut into hillsides and covered with a minimum of 12 inches of earth. Structures near the shoreline were covered with earth or sand to conform to the surrounding terrain.(6)

On April 1, 1942 the department engineer requested the services of an experienced naval officer to assist with the final setting of the 5-inch guns on their mounts at the completed batteries. Captain Kitts, USN, gunnery officer at Pearl Harbor, arranged for a naval representative to assist with the mounting of the 5-inch guns, as well as the 8-inch naval turret mounts being emplaced on Oahu. The 5-inch batteries were named September 6, 1942, by the commanding officer of the HSCAC.(7)

Specifications for the 5 in 51 cal gun (8)

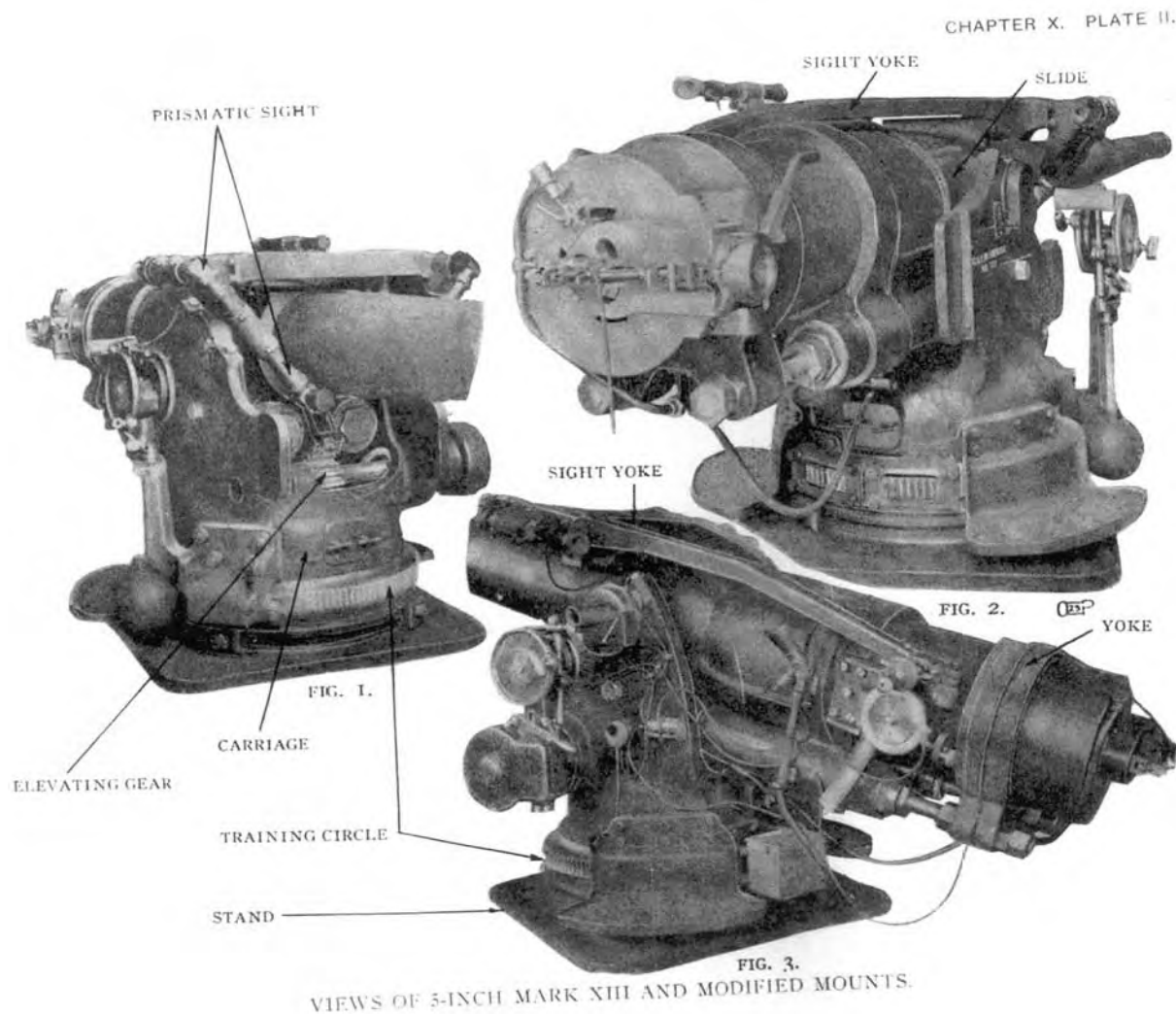
Elevation:	-15° to +20°
Weight:	5.09 t.
Length o/a:	261.25 in. (21.8 ft)
Projectile weight:	50 lb
Propellant charge:	24.5 lb NC
Life of tube:	900 rounds (approx.)
Range:	14,050 yd/15° (7.98 mi.), 17,100 yd/20° (9.7 mi.)
Muzzle velocity:	3150 ft/sec

These breech-loading (BL) guns had originally armed the battleships of the *New York*, *Oklahoma*, *Pennsylvania*, *New Mexico*, *California*, and *Maryland* classes, and in addition had been fitted on the *Utah*, *Arkansas*, and *Delaware* classes after they were in service.(9)

The guns fired bag ammunition—the powder was enclosed in silk bags with an igniter charge in the base of the bag. Aboard ship the powder charges were stored in canisters, horizontally in tiers.(10)

Close-in and antiaircraft defense of the batteries were provided by .30 and .50 cal machine guns, respectively. Photographs of Battery Homestead show M2 .50 cal water-cooled flexible Browning machine guns mounted on M1 tripods in two separate pits approximately 6 feet in diameter and 5 feet deep that were shored with timbers. The .30 cal close-in defense weapons were typically mounted on galvanized 2 in diameter pipes, 33 in long, set in 7 in-diameter concrete bases, which were in dugout pits.

First priority was assigned to the proposed battery on the west coast at Makua Valley. The department engineer's G-3 noted January 20, 1942, that the site presented potential problems, as the hillside could be scarred due to having to excavate a rocky area, and a cliff 50 feet to the rear of the proposed position posed a danger of rocks being dislodged during a bombardment and falling on the positions. Lastly, the Makua site was too close to the beach and therefore subject to assault by a raiding party from either front or rear. Lieutenant Colonel Lawton, HCAC, and Lieutenant Muller, department engineer G-3 office, found a suitable site instead of the Makua Valley site. The position, identified only as coordinates: 2697/35 – 974.7 (Keau Homesteads) was satisfactory in all aspects except for a lessened field



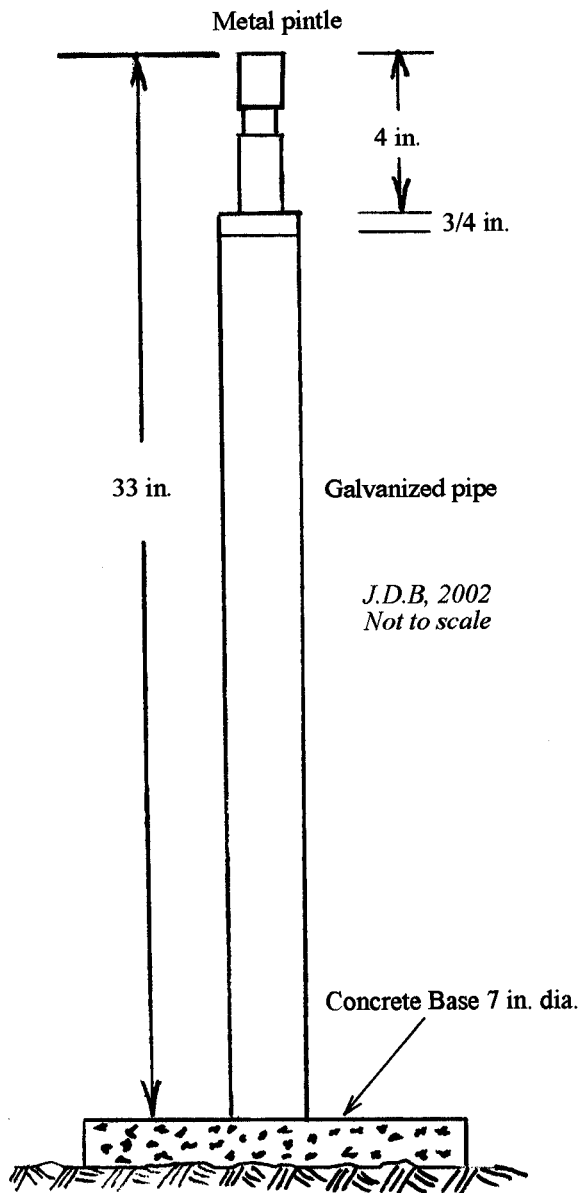
5-inch Mk VIII gun & mount. *Naval Ordnance*, 1933.

of fire at the southern end, but Lieutenant Colonel Martin remarked that this should not disqualify the site as its mission was to defend the immediate front and the Kaena Point area. It was about 1,000 yards from the beach, making it more difficult for a small raiding party to overrun the battery.(11) As a result, the Makua Valley battery site was moved some two miles south to the Keauu Homesteads.

Battery Homestead

The battery had been called Battery Makua until it was relocated to the Keauu Homesteads, when it became Battery Homestead. It was built on the West Shore approximately one mile inland from the shoreline, near Barking Sands Beach, on several parcels of land totaling 58.4 acres between Makua Valley to the north and Kepuhi Point to the south. The plot included three houses and a well with two pumps and a 5,000-gallon water tank. The cowhand and his family who occupied one of the houses were to be evacuated from the area.(12)

The district engineer received authorization for construction on February 9, 1942, and civilian crews of the engineer department started work the next day, while members of the battery laid field wire and constructed four machine-gun emplacements. The construction of the gun emplacements and



Typical .30 Cal. MG Mount
(Adapted from W. Taylor)

.30 cal. MG mount. Adapted from a drawing by Wray Taylor

splinter-proof ammunition shelters, under Contract No. W-414-eng-602, was completed on June 15, 1942, by Hawaiian Constructors, a consortium of four civilian contractors who also completed the battery commander's station and splinterproof personnel shelter on July 24, 1942.(13)

The 804th CA (HD) Battery (Separate) manned Battery Homestead with personnel detailed from Battery A, 15th CA, and Battery A, 55th CA.

The emplacements were on a spur of the Waianae Range between the 300 and 400 foot contours; the base camp was approximately ½ mile west-southwest of the gun emplacements, between the 100 and 200-foot contours. Access to the battery was via a dirt four-wheel-drive road that followed the contour of the terrain.

Battery Homestead was equipped with three 5-inch 51 cal Mk XV guns, Nos. 731-L, 1496-L, and 1104-L, on Mk VIII M8 carriages Nos. 706, 750, and 723. The suffix L indicated the gun tube had been relined.(14)

The author discovered three widely dispersed gun emplacements in 2000; only Emplacement 2 was relatively intact, with the 2 in steel mounting plate in the middle of a concrete firing platform. The two other gun emplacements had either been buried or destroyed; what remained were 30 ft-diameter pits near their projectile and powder magazines.(15)

Gun Number 1 was identified in a photograph taken by Cpl. Roscoe Savage c. 1943 as having been removed from BB-48, USS *West Virginia*, damaged during the Pearl Harbor attack.(16)

Other structures found conformed to Helmboldt's description of the 5-inch naval gun batteries built on Oahu in World War Two; structures examined included the plotting room with an escape housing on the roof, three pair of cut and cover magazines, and a splinterproof-concrete BCS that had been equipped with an azimuth instrument and a 15-foot coincidence range finder (CRF).

A photograph in the Savage Collection, c. 1942-43, shows what Colonel Savage termed the telephone exchange/communications center; this was apparently a fire control switchboard. It and the power room for the 5 KVA generator were not found.(17)



Battery Homestead, Gun No. 1. *Savage Collection, USAMHI*



Battery Homestead, emplacement No. 2

A single pipe mount for a .30 cal. machine gun was discovered in a partially covered pit northeast of the battery commander's station. AAMG pipe mounts were one of the emergency measures employed by the Hawaiian Department in late 1941 and early 1942. They consisted of vertical machine gun mounts of galvanized pipe or concrete posts mounted in pits, with bases embedded in concrete. The defenses also called for slit trenches, both below and above ground. The 34th Engineers provided assistance for troops building four such machine gun emplacements for close-in defense of the battery.(18)

Battery Homestead was completed by April 20, 1942, when the concrete bases for the gun mounts and the splinterproof auxiliary structures were finished and the 15-foot CRF was mounted. The battery's guns, as well as those emplaced at Ahua Point and Oneula Beach, were proof fired prior to May 22, 1942. The completed work was inspected on October 8, 1942, and found suitable for the intended purpose.(19)

Thought was given to casemating Battery Homestead's guns on April 24, 1942; Major General H.T. Burgin, commanding HCAC, felt that the position was important enough for casemates, either splinterproof or bombproof. Col. Albert Lyman, district engineer, in response to the general's request, proposed splinterproof bunkers with concrete inner-walls or other effective revetment with dirt fills, to give the effect of partial casemating, which he felt would protect against anything but a direct hit. General Burgin felt that as originally designed, the proposed bunker design would not protect against .50 cal machine-gun bullets.(20) In the end, however, the order was rescinded because other defense projects had higher priority.

On January 14, 1943, the engineering officer of the HSCAC requested that the district engineer's planning division design a cut-and-cover fire control station for Battery Homestead, using a depression position finder (DPF) already on hand to augment the existing CRF and azimuth instrument.(21)

The base camp included a headquarters in one of the existing dwellings, eight 8-man tents on raised concrete platforms, a motor pool, a mess hall, latrine and shower house, and the PX run by Corporal Savage. The camp, called "Happy Valley" by the members of the battery, was near the Oahu Railway and Land Company's (OR&L) Homestead railroad station.(22)

Construction of four 360° Panama mounts for 155 mm M1918 GPF guns was commenced in November 1942. These were also manned by the 804th CA (HD) Battery (Separate) until May 23, 1943, when the 804th was reassigned; the 155 mm guns were used thereafter for target practice by coast artillery units stationed in the Waianae Amphibious Training Area.(23)

The battery's 5-inch guns were taken out of service in mid-1943 after a survey conducted by General Burgin, then commanding the Hawaiian Artillery Command (HAC), recommended that all 5-inch batteries be abolished at a time to be selected by the commanding general of the Central Pacific Base Command (CPBC). General Burgin indicated on December 28, 1943, that the 5-inch navy guns at Homestead, Kahana, Oneula, and Ahua were unsuited for seacoast defense against maneuvering targets where a high rate of fire was essential, and the batteries' fire control instruments were unsuited for seacoast use. Burgin further noted that the projectiles used in the navy guns were unsatisfactory when compared with 155 mm or even 90 mm guns.(24)

On January 27, 1944, the HAC directed the engineers to remove all three 5 in guns at Battery Homestead and modify the emplacements to accommodate four 155 mm M1/M1A1 guns on 360° portable mounts. It is not known, however, whether these guns were ever emplaced at Battery Homestead.(25)

The former battery site is now used for cattle and horse ranching; portions of the land are owned by the State of Hawaii and portions are privately held.



Battery commander's station of Battery Homestead



Interior of the BCS showing CRF mounting pier



One of three .50 cal. AAMG emplacements at Battery Homestead. Cpl. Roscoe Savage manning the gun c. 1943.
Savage Collection, USAMHI



Slit trench on Oahu. *Author's Collection*



M1 155 mm gun on 360° portable mount. *TM 4-210*

Battery Nanakuli

Battery Nanakuli was situated near the Hawaiian Homesteads at Nanakuli on the West Shore of Oahu in Camp Andrews, used for navy recreation and Marine Corps training. The camp was directly across the Waianae Coast Road (now Farrington Highway) from the beach and the Nanakuli OR&L railroad station. The area was a flat, arid coastal plain; chiefly coral, sand, low shrubs, and thorny trees.

The battery was equipped with one 3-inch naval and two 5-inch Mk VII Mod 2 naval guns, Nos. 397 and 294, mounted on Mk VIII M12 pedestal mounts Nos. 1149 and 1165, which were emplaced shortly after December 7, 1941. It was sited to defend the Lualualei Naval Ammunition Depot and radio station from small vessels or amphibious assault, and was initially manned by the 3rd Marine Defense Bn, headquartered at Pearl Harbor, under Lieutenant Colonel R.H. Pepper.

The marines were relieved in April 1942 by a detail of coast artillerymen, which was to have been only temporary. The army believed the battery too close to the shore to defend against an enemy landing, so a proposal was made to relocate the battery to the Puu o Hulu area several miles up the coast, closer to the village of Maili. The decision was soon made to transfer the battery to the army, but keep it at Camp Andrews. The battery site became a part of the Nanakuli Military Reservation, although Camp Andrews remained a navy recreational facility with overnight cabins for enlisted men.(26)

Brig. Gen. Robert C. Garrett told the commanding general of the Hawaiian Department on July 31, 1942, that certain improvements were needed at Battery Nanakuli. Garrett recommended additional barbed-wire for close-in defense; enlargement of existing magazines to provide cut-and-cover splinter-proof structures for 300 complete rounds per 5-inch gun; a 30-foot fire control tower, from a pre-existing demountable 50-foot tower being stored by the 34th Engineers; a 2.5-meter CRF on a platform on the 30-foot tower; and a splinter-proof 15 x 15 x 7-foot plotting room, which was to be cut and cover, timber-revetted, then covered with sand. Lastly, Garrett recommended three pipe-mounts for existing .30 cal ground-defense machine guns. General Burgin directed the 34th Engineers to begin construction of the improvements on August 24, 1942, but with no mention of the fire control tower.(27)

A detachment of the 808th CA (HD) Battery (Separate), activated at Fort Kamehameha on May 28, 1942, manned Battery Nanakuli's guns until May 23, 1943, when the 808th was redesignated Battery B, 41st CA (HD) Regiment; it is believed the guns were not in active service after late May 1943.(28)

Fifteen acres of Camp Andrews and the battery site are now owned by the Hawaii Department of Land and Natural Resources and 12 acres by the Department of Hawaiian Home Lands. The 15-acre parcel is being developed as the site for an elementary school and all vestiges of Camp Andrews and the battery are thought to have been demolished by the contractor.

Battery Oneula

Battery Oneula was on Parcel B of a 51-acre two-parcel tract on the southwest coast of Oahu, about 2 miles west of Fort Weaver, at Oneula Beach. The tract became the Oneula Military Reservation. Parcel A was occupied by a field artillery detachment, which on April 13, 1942, prompted General Garrett, commanding the HSAC, to ask the department commander to include Parcel A in the land requirement so the coast artillery would have full control over the tactical wire which was laid, should the field artillery unit be withdrawn.(29)

The reservation was east of Naval Air Station Barber's Point, an important logistical base that was commissioned on April 15, 1942, and southeast of the Marine Corps Air Station Ewa.(30)

Battery Oneula, just west of Fire Control Station X-Ray on the coastline, was initially equipped with three 5-inch 51 cal navy guns. The battery's guns had a 180° field of fire, and used the standard mounting of steel plate, cushioned by timber, bolted to a concrete gun block.(31) Battery X-Ray, an alternate site for 155 mm GPF guns, was also constructed in the Oneula Beach area northwest of Fire Control Station X-Ray, which was located on a tower situated at the coast.

General Garrett wrote General Burgin on May 17, 1942, regarding splinter-proof concrete casemates for the Oneula and Ahua Point batteries. If casemates were found practicable, Garrett requested a sketch showing the type of structure recommended and the costs involved. The department engineer furnished a drawing showing the details of casemates costing \$3,100 per gun.(32)

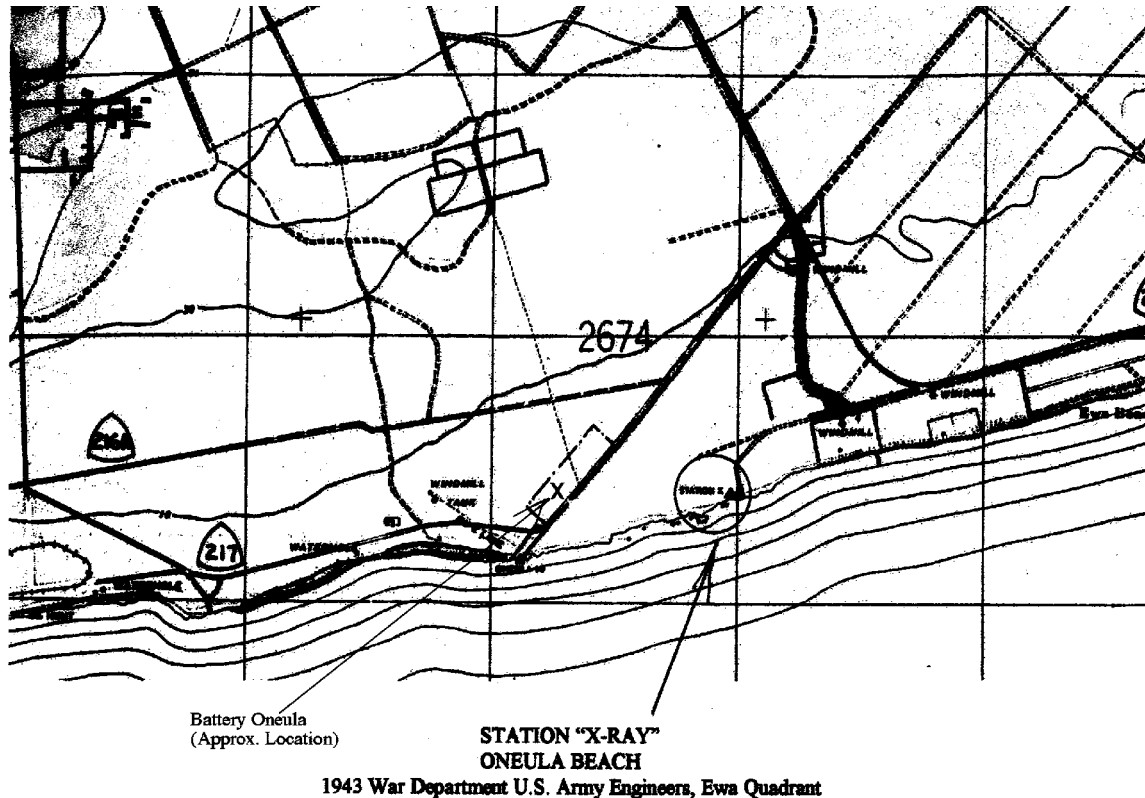
On September 10, 1942, the department engineer announced that the following improvements would be constructed: additional camouflage, a 70-man mess hall, enlarged latrines, electrical wiring in the magazines and elsewhere, and a portable 16 x 20 ft storage building. In addition, the engineers would assist the troops constructing ground-defenses. The 34th Engineers were then ordered to make these improvements, plus install a 5 KVA standby power unit in simple earth-filled bunker to be built with troop labor, supervised by the engineers.(33)

On October 12, 1942, General Garrett recommended a new concrete cut-and-cover gasproof and splinter-proof plotting room, urgently needed to house a time-range board to be used in conjunction with a CRF, a relocating board for obtaining range from other batteries in an emergency, a percentage corrector, a wind component indicator or chart for determining range, wind, and cross-wind components, ballistic charts and tables for applying ballistic corrections, and lastly, a battery telephone switchboard.(34)

Separate battery commander's and fire control stations were built atop 15-foot wooden towers to provide for the command and fire control functions of the battery as described by Helmboldt. The 808th CA (HD) Battery manned the battery from May 28, 1942, until May 23, 1943, when the unit was redesignated Battery B, 41st CA. After the plans had been drawn, the Hawaiian Department disapproved casemating Battery Oneula's 5-inch guns because other projects had higher priority for the crushed rock needed.(35)

The battery's armament was reduced to two 5-inch guns in September 1942 with the transfer of one gun to the newly completed battery at Kahana Bay on the east side of the island. In 1943, one gun from Battery Ahua was moved and it is believed to have gone to Battery Oneula.(36)

The Department of Parks and Recreation, City and County of Honolulu, now owns portions of the former Oneula Military Reservation. It is presently an open area planted with grass and a few coconut trees, and fishermen and surfers frequent the beachfront. Land surrounding the public park is in private hands, although a small beachfront strip west of the park is due to be turned over to the city in the near future by the developer of a private marina.

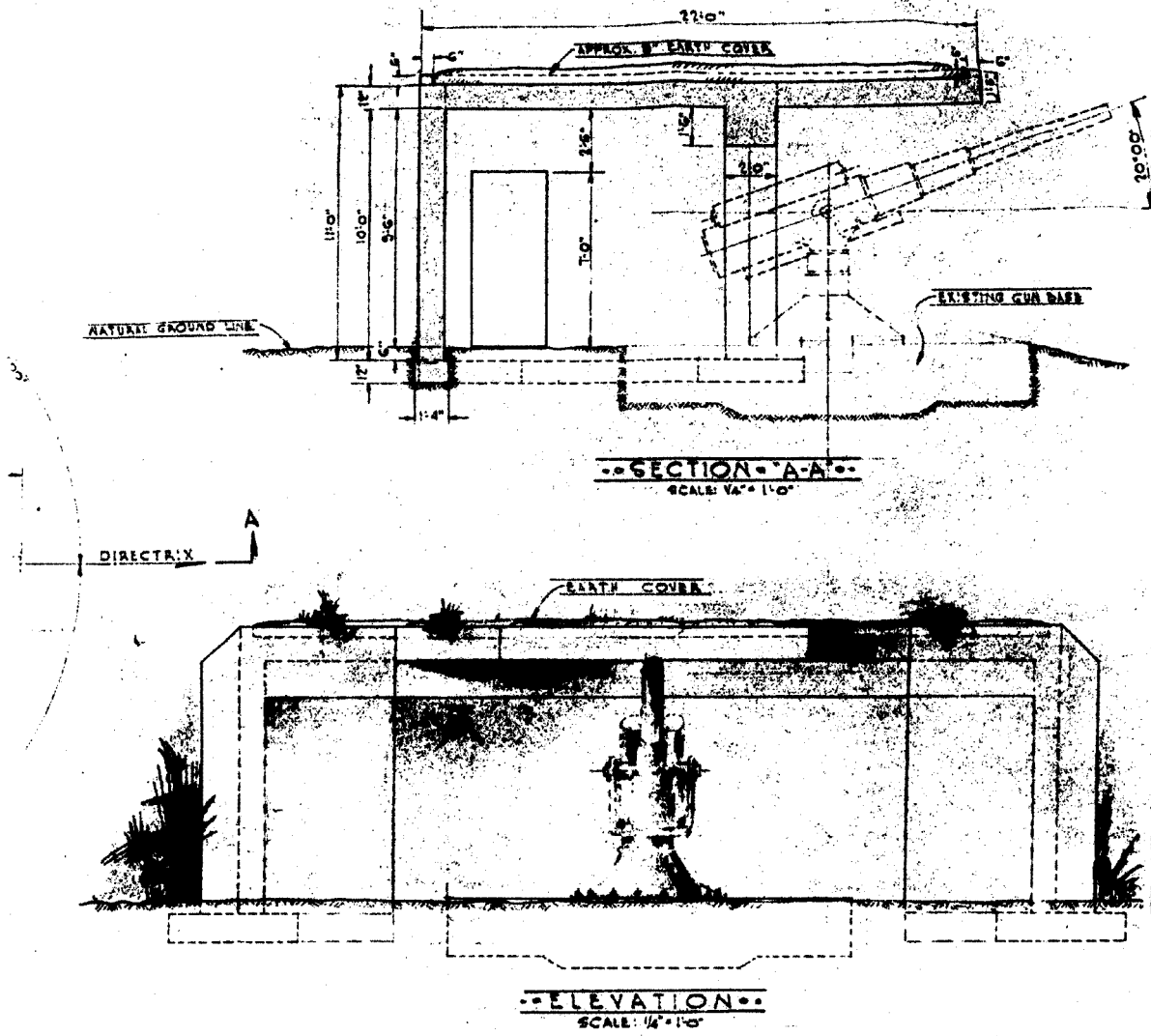


Location of Fire Control Station X-Ray. Adapted from 1943 Corps of Engineers

Battery Ahua

Battery Ahua, begun in late February 1942, was on the eastern edge of Fort Kamehameha, west of Ahua Point, and was one of several coast artillery installations in the area, including Fire Control Station G and a complex of fire control stations built between 1912 and 1913. The battery was equipped with three 5-inch 51 cal Mk XV navy guns, Nos. 1223-L, 524-L, and 749, on Mk XIII M8 pedestal mounts Nos. 753, 740, and 749, with a 180° field of fire.(37) The 5-inch guns were mounted similarly to those at Battery Oneula; the battery was named on June 12, 1942.

Two wooden towers similar to those at Battery Oneula provided the platforms for the battery commander's and fire control stations, and for the observation instruments.(38) The steel mounting plates for the guns were sub-contracted to the Honolulu Iron Works. Construction of the battery was concluded on April 30, 1942. Sometime in 1943 gun and mount 749 were moved. The documents say the gun was moved to Battery X-Ray, but Battery X-Ray was a 155 mm GPF battery built in early



ESTIMATED QUANTITIES
 CONCRETE ----- 57 Cu. Yds.
 REIN. STEEL ----- 8800 Pounds.

SEACOST DEFENSE, HAWAIIAN DEPARTMENT			
FIVE INCH NAVAL GUN POSITIONS			
ONEULA & AHUA, OAHU, T. H.			
SPLINTERPROOF - CASEMATING			
SCALE: AS SHOWN	IN SHEETS	SHEET NO.	
U. S. ENGINEER OFFICE HONOLULU, T. H.		MAY, 1942	
DESIGNED	DRAWN	CHECKED	FILE NO.
J. A. B.	H. S. P.	J. A. B.	F. 45/54
DESIGNED BY DIVISION		TO ACCOMPANY	
ENGINEERING DIVISION		-DB ORDER NO. 484-W-	
CORPORATION OF HAWAII		CORPORATION OF HAWAII	

Proposed casemate for 5-inch batteries. NARA

1942 near Oneula Beach. It is believed that what was meant was nearby Battery Oneula. The HSCAC also considered casemating Battery Ahua's guns, but the Hawaiian Department disapproved, as it did the other 5-inch batteries.

The battery was manned by a detachment of Battery B, 15th CA, later redesignated Battery 80-X. The battery manned the guns until it and Battery Z merged into the 803rd CA (HD) Battery (Separate). A detachment of the 803rd continued to man the guns until August 24, 1943, when the 803rd was redesignated Battery H, 15th CA, and transferred to Brown's Camp.(39)

Battery Wailea

This battery was emplaced on the southeast coast of Windward Oahu near Wailea Point, separating the community of Lanikai from Bellows Army Air Base on the Waimanalo Military Reservation. Battery Wailea initially consisted of two 155 mm M1918 GPF guns that had originally been emplaced at Battery East on the Mokapu Peninsula. The two guns were temporarily relocated to the south side of Wailea Point where they covered Waimanalo Bay. The 155 mm guns were soon replaced by two 5-inch Mk VIII navy guns on pedestal mounts in the early spring of 1942. They were kept there until early summer 1942, when they were replaced by two 3-inch rapid-fire guns from the Hawaiian Ordnance Depot. The 3-inch guns had been removed from Battery Chandler at Fort Kamehameha when that battery was deactivated in the mid-1930s.

The 5-inch guns were manned by Battery W, a provisional detachment from the 41st and 57th CA Regiments. A portion of the personnel from the detachment formed Battery H, 41st CA, in the summer of 1943, and was posted to Puu Papaa, near Fort Hase and NAS Kaneohe, where they manned the 155 mm battery in addition to the guns at Wailea Point. In October 1943 the commanding general of the HAC recommended that Battery Wailea's 3-inch guns be eliminated from the Hawaiian Department defense project at a time to be selected by the commanding general CPBC.

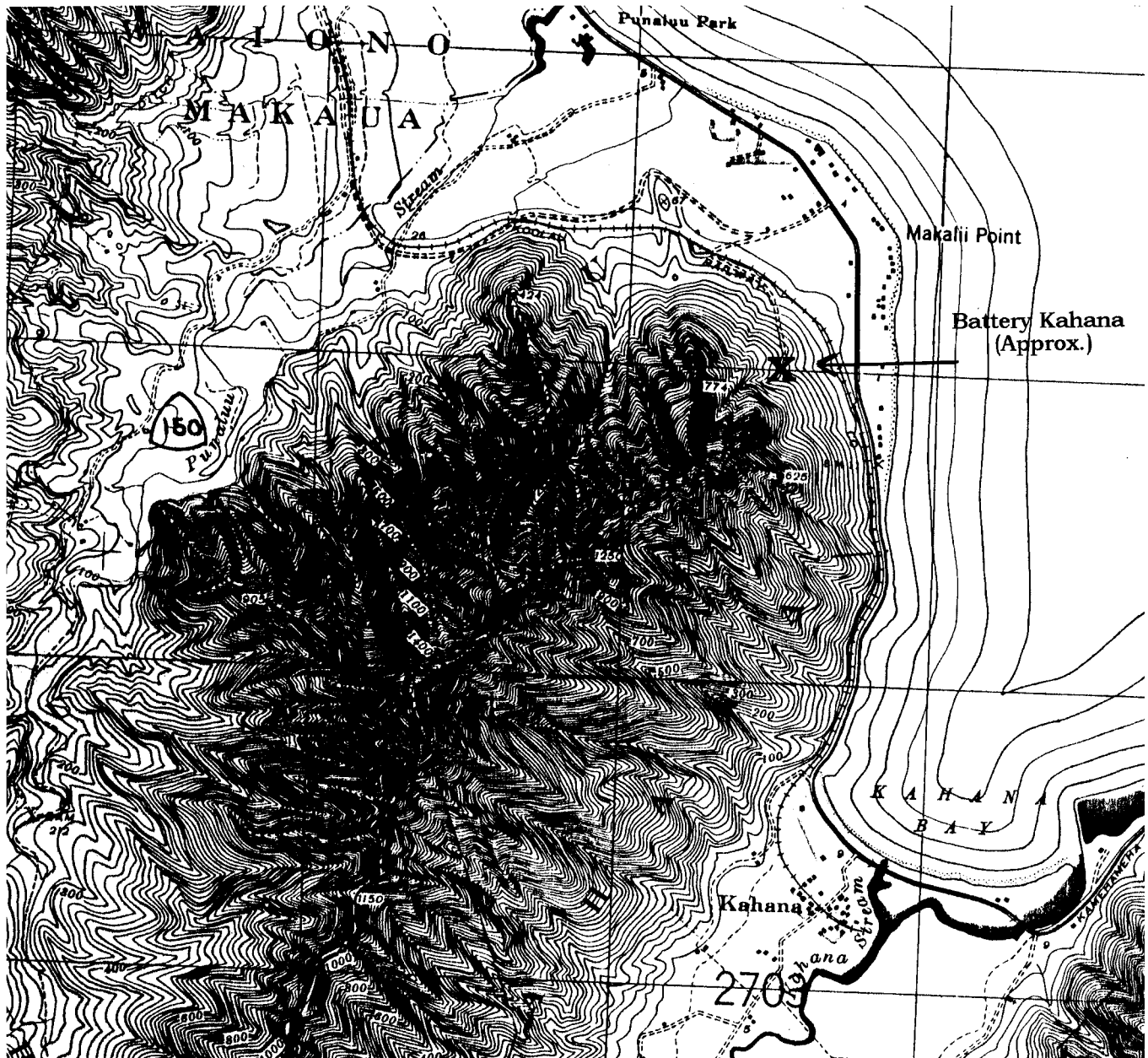
By late 1943 there were at least two 90 mm M1 dual-purpose guns on M1 mobile carriages at Wailea Point, manned by Battery H, 41st CA, until the end of May 1944, when Battery H and most of the 41st were inactivated. The 3-inch seacoast guns were placed in a reduced manning status when the 90 mm guns arrived, and they were removed by September 1, 1945. Battery H, 16th CA, returned to Oahu from Hilo on the Island of Hawaii at the end of May 1944 and took over the 90 mm guns at Wailea Point in addition to newly completed Battery Construction No. 405 (Battery DeMerritt, two 8-inch guns) at Puu Papaa. When Battery H, 16th CA, was inactivated in August 1944, the 90-man detachment manning the 90 mm guns at Wailea Point was assigned to Battery A, 55th CA Bn, at Fort Hase.(40)

The land upon which Battery Wailea and subsequent seacoast batteries were built is part of Bellows Air Force Station, which combines a marine training area with recreational cottages for military personnel.

Battery Kahana

On October 28, 1942, the area engineer of the 1st Field Area was ordered to construct Battery Kahana, the last emergency 5-inch naval gun battery on Oahu.(41) The battery was on the lower east slope of Puu Kila (elev. 1250 feet), inland of Makalii Point, just north of Kahana Bay on the East Shore of Oahu.

Battery Kahana was equipped with three 5-inch Mk VIII guns, Nos. 1175, 1247, and 1490-L, on Mk XIIM4 mounts, Nos. 2402, 1788, and 1097. Its construction was similar to Battery Homestead; both batteries were on hillsides with splinterproof reinforced-concrete battery commanders' stations.



Map of Kahana Bay showing approximate location of Battery Kahana.

Adapted from 1943 Corps of Engineers

The powder and projectile magazines, plotting room, and generator room were also cut-and-cover, as at Battery Homestead. The projectile magazines for 700 rounds per gun faced away from the ocean. The BCS was originally planned for an azimuth instrument on a tripod and a 2.5-meter CRF, with provision to acquire a DPF instrument thought superior to the navy CRF.(42)

Construction was completed on May 20, 1943, including three 16-foot-diameter concrete bases for the guns, three sets of concrete powder and projectile magazines, an 8 x 10 x 7 ft splinterproof concrete shelter for a 5 KVA generator, and a 15 x 20 ft concrete plotting room, as well as access roads and utilities, including a complete electrical distribution system.(43)

The site for the camp was on the ocean side of Kamehameha Highway, on three parcels of land the army acquired for \$130.00 per month, with the homes on them. The land across the highway from

the homes, leased to the Kahuku Plantation Co. and planted in sugarcane, flooded when the irrigation ditches overflowed, and so was unsuitable for the camp, even though closer to the battery. Lieutenant Colonel A.C. Gay, commanding the 41st CA (Ry) Regiment headquartered at Fort Hase, accompanied by Major Wilhelm, inspected the completed battery prior to June 2, 1943, and found the work to be satisfactory.(44)

Battery Kahana was initially manned by units of the Harbor Defenses of Kaneohe Bay. The majority of the men came from Battery C, 41st CA (RY), which formed a provisional battery to man the guns. The unit, eventually designated the 715th CA (HD) Battery (Separate), manned the guns until Battery G, 41st CA Regiment, was formed in May 1943, incorporating some of the personnel from the 715th. Battery G was redesignated the 852nd Searchlight Battery (Separate) in May 1944 and ceased to man Battery Kahana. After the guns of Battery Kahana were placed in caretaking status in March 1944, there was a succession of 155 mm gun batteries there, mostly short term.(45)

The tract where the battery was built has reverted to the ownership of the Bernice P. Bishop-Kamehameha Schools Estate, and the base camp was returned to the original owners.

Acknowledgements

The author is especially grateful to William Gaines, who helped greatly with this writing and proof-read the final draft, along with Alvin Grobmeier; thanks to Bolling Smith for making available material from NARA II, and Robert Zink for providing data on the 5-inch navy guns, and lastly to Ms. Judith Bowman, curator of the U.S. Army Museum, Hawaii, for providing photographs and material from the Savage Collection.

Endnotes

1. H.T. Burgin, CG HCAC, to CG Hawaiian Department, "Proposed location of 5-inch batteries," January 7, 1942, Hawaiian Dept. Engineer, General Correspondence, 1920-1946, U.S. Army Forces Middle Pacific and Predecessor Commands, 1942-, RG 494, NARA (hereafter: HDE.) All NARA citations are from College Park, MD.
2. O. McDole, AAG Haw. Dept., to Dept. Engr., "Construction of Emplacements and Fire Control Towers for 5"-51 cal. Navy Guns," January 1942, HDE.
3. Major O. McDole to Dept. Engr., Jan. 1942, HDE.
4. HQ Haw. Dept., Inter-staff routing slip, "Construction of Concrete Emplacements for 5"-51 cal. Naval Guns," 1st Ind. by Dept. Engr., 22 Jan 1942, HDE.
5. Index Sheet, File No. 662 (5" Guns), referral to BG R.M. Perkins's letter to Dept. Engr., 25 March 1942, "Auxiliary Power Plants for 5" Navy Batteries"; D. Emmons, CG Haw. Dept., letter to Dept. Engr, 28 Mar 1942, HDE.
6. Henry E. Helmboldt, "Oahu's World War II Five Inch Batteries," *CDSG News*, Vol. 4, No. 2 (May 1990), p. 21, reprinted from War Department, "Historical Review, Corps of Engineers United States Army Volume 1, Covering Operations During World War II, Pacific Ocean Area," RG 494, Entry 125, NARA. (Hereafter: Helmboldt.)
7. Dept. Engr. to G-3, Inter-staff routing slip, 1st and 2nd Ind., 1 April and 2 April 1942; E. Fielding, AG Haw. Dept., to Dept. Engr., "Information Geographical Names of Batteries, Armament, Manning Personnel and Coordinates of Batteries of the H.S.A. Command," September 6, 1942, HDE.
8. John Campbell, *Naval Weapons of World War Two*, (Annapolis: Naval Institute Press, 1985), p. 136. Navy Dept., Bureau of Ordnance Pamphlet 1112 (2nd Rev.) *5-in Mount, Mark 15 Mods. 1-5, 5-in 51 cal., S.P., Single Mount, Open Pedestal Type*, corrected as of 15 January 1945.
9. Campbell, p. 136. James C. Fahey, *The Ships And Aircraft of The U.S. Fleet, 1939*, (New York: The Nathan-Herald Press, 1939), pp. 5-6.

10. *Naval Ordnance*, (Annapolis, MD: US Naval Institute, 1933.), pp. 576, 584, & 684.
11. Dept. Engr. G-3, to CG HCAC, "Proposed Location of 5-Inch Gun Positions," 2nd Ind., January 20, 1942, HDE. Corps of Engineers, Terrain Map, Waianae Quadrangle, 1943.
12. R.C. Garrett to CG Haw. Dept., "Acquisition of Land for 5" Seacoast Batteries," April 13, 1942, HDE.
13. Inter-office routing-slip, February 9, 1942; D. Martin to H.T. Burgin, memorandum, May 18, 1942; J. Matson, Jr., Asst. Dept. Engr. to CG Haw. Dept., "Contract No. W-414-eng-602 – Transfer of Work Completed under Job Orders Nos. 464-W and 465-W, Addendum No. 1," HDE. Gwenfread Allen, *Hawaii's War Years 1941-1945*, (Kailua, Hawaii: Pacific Monograph, 1999), p. 252.
14. Gaines, "Makua Military Reservation, Battery Homestead," unpublished MS in author's collection, p. 4. Map, "Suggested Water Supply Installation For Camouflage Batry [sic] Homestead-Makua," unknown author/date, HDE. Map by Roscoe Savage, c. 1980, depicting the base camp, Savage Collection, U.S. Army Museum of Hawaii. Haw. Dept., 1944 Ordnance Survey, Makua. Robert Zink, E-mail to author, June 2002.
15. John D. Bennett, "Exploring Battery Homestead," *CDSG Newsletter*, Vol. 15, No. 2 (May 2002), pp. 9-15.
16. Savage Collection (photographs, letter, and map depicting Battery Homestead, 1980, by Roscoe Savage, LTC USA (Ret.) who ran the PX at Battery Homestead circa 1942 to 1943 as a corporal).
17. Map of battery site, Savage Collection. Haw. Dept. Inter-staff routing slip, "Engineer Construction at Battery Homestead," 2nd Ind. by Dept. Engr., September 13, 1942, recommending installation of two 5 KVA gasoline-driven generator sets; 5th Ind. by Col. H. L. Robb, commanding 47th Engineers, to Dept. Engr. on November 12, 1942, suggested that the presently installed 5 KVA generator would be sufficient for the battery's needs; there was no need for an additional 5 KVA generator, HDE.
18. H.T. Burgin, CG HSCAB, to Engineers, "Engineer Assistance," December 10, 1941; HQ Haw. Dept., Inter-staff routing slip, "Engineer Construction at Battery Homestead," 1st Ind. by BG Robert C. Garrett, CG HSCAC, HDE.
19. Dept. Engr. to G-3, "Report of Operations in the Emplacing of Naval Seacoast Artillery," 4 April 1942; R.E. Vellin, Maj., commanding 1st Bn, 41st CA, to HQ Bn, 41st CA, "Report of Inspection of Engineer Work at Battery Homestead," October 8, 1942, approved by CG HD of Pearl Harbor, 1st Ind., October 26, 1942, by L.G. Hays, Capt., 15th CA, Acting Adjutant, HDE.
20. Inter-staff routing slip, H.T. Burgin, CG HCAC, to Dept. Engr. (Col. A. Lyman), "Casemating Navy Guns," 1st Ind., April 24, 1942; 2nd Ind. by Col. A. Lyman, April 29, 1942; 3rd Indorsement, May 4, 1942, HDE.
21. J. Meadows to Dist. Engineer, Planning Division, "Request for One Single Cut and Cover Fire Control Station with DPF Pier at Battery Homestead," January 14, 1943, HDE.
22. Savage Collection.
23. Gaines, "The Navy Five-Inch Emergency Naval Batteries On Oahu in World War II, Battery Homestead," unpublished MS in author's collection, p. 6.
24. Ibid, pp. 3-4. Inter-Office Routing Slip, H.T. Burgin, December 28, 1943, HDE.
25. Gaines, "Battery Homestead," p. 4. H. Westphalinger, Acting Dir., Requirements Div., Army Service Forces, "Modernization Program, Seacoast Artillery, Oahu, T.H., Dec. 18, 1943," (CG Army Service Forces ordered that four 155 M1 guns be installed at both Batteries Homestead and Kahana.) HDE.
26. Gaines, "Nanakuli Military Reservation, Battery Nanakuli," unpublished MS in author's collection. Allen, p. 285.
27. R.C. Garrett, commanding HSCAC to CG Haw. Dept., "Improvement of Battery Nanakuli," July 31, 1942; H.T. Burgin to CG HSCAC, "Improvements at Battery Nanakuli," August 24, 1942, HDE.
28. Gaines, "Battery Nanakuli," pp. 19-20.
29. R.C. Garrett to CG Haw. Dept., "Acquisition of Land for 5" Seacoast Batteries," April 13, 1942, HDE.
30. Marine Corps Air Station Ewa was built at the former Ewa Mooring Mast for the navy dirigible *Akron*. Once the original lease expired in 1940, the navy purchased more than 3,500 acres from the Campbell Estate, which laid the groundwork for the Ewa MCAS and Barbers Point NAS.
31. Gaines, "Oneula Military Reservation, Battery Oneula," unpublished MS in author's collection, p. 53.

32. R.C. Garrett to H.T. Burgin, "Splinter-proof Casemates for 5-inch Guns," 1st Ind., May 17, 1942; Dept. Engr. to R.C. Garrett, 2nd Ind., May 28, 1942, HDE.
33. Dept. Engr. to G-4, "Engineer Construction at Battery Oneula," 1st Ind., Inter-staff routing slip, 10 Sep 42; J.E. Shields, Asst. Dept. Engr to CO 34th Engineers, "Construction at Battery Oneula," October 1, 1942, HDE.
34. R.C. Garrett to HCAC, "Engineer Construction at Battery Oneula," 2nd Ind., July 6, 1942, HDE.
35. Helmboldt, p. 21. Gaines, "Battery Oneula," p. 53. Dept. Engr., "Splinter-proof Casemates for 5-inch Guns," 5th Ind., June 11, 1942. The crushed-rock aggregate was needed for higher priority projects that included the War Reserve Gasoline Storage, Tactical Telephone Exchanges X and Y, and casemating major gun batteries, among the seven projects named.
36. Gaines, "Battery Oneula," p. 53.
37. Gaines, "Fort Kamehameha, Battery Ahua," unpublished MS in author's collection, p. 94. Dept. Engr. Office, HHD, Fort Shafter, sectional map showing the proposed site of Battery Ahua, Site No. 3, HDE.
38. Helmboldt, p. 21.
39. Dept. Engr. to G-3, "Report of Operations in the Emplacing of Naval Seacoast Artillery," 4 April 1942, HDE. Gaines, "Fort Kamehameha, Battery Ahua," p. 94, and "Battery X-Ray," p. 51.
40. Gaines, "Waimanalo Military Reservation, Battery Wailea," unpublished MS in author's collection, pp. 206-208.
41. J. Matson, Jr. to Area Engineer, 1st Field Area, "Installation of 5-inch Navy Battery," 28 October 1942, HDE.
42. Haw. Dept., 1944 Ordnance Survey, Kahana. Helmboldt, p. 21. HQ HSCAC to CG Haw. Dept., "Installation of 3-Gun Navy 5"/51 caliber Battery near Makalii Pt," Oct. 27, 1942, HDE.
43. C.D. Baker to CG HSCAC, "Transfer of Completed Work at Kahana Bay, T.H.," 20 May 43, HDE.
44. U.S. Engineer's Office, Inter-office memorandum, Dec. 16, 1942; A.C. Gay, CO 41st CA, to Colonel H. Tenney, commanding HD Kaneohe Bay, 2 June 1943, HDE.
45. Gaines, "5-Inch Batteries: Battery Kahana," unpublished MS in author's collection, pp.14-16.

Additional Sources

- "US Marine Corps Defense Battalions," <<http://www.star-games.com/exhibits/defbns/defbns.html>>, October 30, 2002.
- The R.O.T.C. Manual - Coast Artillery, Basic*, 9th Ed., (Harrisburg: Military Service Pub. Co., 1937).
- Dorrance, William H., and Francis S. Morgan, *Sugar Islands - The 165-Year Story of Sugar in Hawaii*, (Honolulu: Mutual Pub., 2000).
- War Department. Technical Manual TM 4-210, *Seacoast Artillery Weapons*. (GPO, 1944).
- War Department. Technical Manual TM 9-1225, *Ordnance Maintenance: Browning Machine Gun-Cal.50, All Types*. (GPO, 1943).